



Behavioral Neurobiology

An integrative approach
Second Edition

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Behavioral Neurobiology introduces undergraduate students and other readers to the fascinating field of neuroethology - the study of the neurobiological processes underlying animal behavior. Written in a lively, easy to read style, it examines the key concepts and ideas which underpin this intricate and elegant subject, and describes many of the groundbreaking

discoveries that have helped us to unravel the mechanisms behind the behaviors we can observe.

CONTENTS

Introduction; Fundamentals of Neurobiology; Fundamentals of Ethology; The Study of Animal behavior: A brief history; Spatial Orientation and Sensory Guidance; Neuronal Control of Motor Output; Neuronal Processing of Sensory Information; Sensorimotor Integration: The Jamming Avoidance Response of the Weakly Electric Fish *Eigenmannia*; Neuromodulation: The Accommodation of Motivational Changes in Behavior; Circadian Rhythms and Biological Clocks; Large-Scale Navigation: Migration and Homing; Communication: the Neuroethology of Cricket Song; Cellular Mechanisms of Learning and Memory

Readership: Undergraduate and postgraduate students taking courses in behavioural neurobiology, neuroethology or similar.

392 pages 2010 978-0-19-920830-2 Paperback £29.99



In remembrance of my initial book, *Neuro-Ethologie*, published by Springer in 1976, it is a real pleasure for me to strongly recommend Zupanc's up-to-date treatment in 2010 to any reader, whether specifically interested in behavioral neurobiology or in the natural sciences generally. I regard this textbook as a milestone in the neuroethological literature since it considers both classical and current facts and views.

Jörg-Peter Ewert in Integrative and Comparative Biology



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- Model answers to end of chapter questions

For students:

- Interview with the author
- A list of references from the book, including recommended reading and end-of-chapter Advanced Topic starter references, with active web links to where available
- Web links to relevant society websites, useful for further information
- Author biography
- Review of *Behavioral Neurobiology* by Jörg-Peter Ewert

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Behavioural Ecology

Edited by Etienne Danchin, Université Paul Sabatier, France, Luc-Alain Giraldeau, Université du Québec à Montréal, Canada, and Frank Cézilly, Université de Bourgogne, France

Behavioural Ecology provides a fascinating insight into the evolutionary and ecological processes that underpin animal behaviour.

Featuring chapters written by university teachers, each with research expertise in their respective fields, *Behavioural Ecology* has been moulded by Danchin, Giraldeau, and Cézilly to give a uniform voice throughout: it is a text with all the qualities of a multi-author book, but without the potential drawbacks. *Behavioural Ecology* offers a fresh, contemporary account of a field re-invigorated by advances in the last decade, making it the ideal teaching and learning text.

CONTENTS

Introduction; **PART ONE: THE BEHAVIOURAL ECOLOGY APPROACH;** A History of Behavioural Ecology; Fundamental Concepts in Behavioural Ecology; Research Methods in Behavioural Ecology; An Information-Driven Approach to Behaviour; **PART TWO: THE DEVELOPMENT OF THE BEHAVIOURAL PHENOTYPE;** Life History Strategies, Multidimensional Trade-offs and Behavioural Syndromes; Hormones and Behaviour; **PART THREE: EXPLOITING THE ENVIRONMENT;** Solitary Foraging Strategies; Choosing Where to Breed: Breeding Habitat Selection; Evolution of Dispersal; **PART FOUR: SEX AND BEHAVIOUR;** Sexual Selection: Another Evolutionary Process; Mating Systems and Parental Care; Sex Allocation; **PART FIVE: SOCIAL INTERACTIONS AMONG INDIVIDUALS;** Hypotheses and Controversies; The Adaptive Evolution of Social Traits; Communication, Sensory Ecology and Signal Evolution; Interspecific Parasitism and Mutualism; **PART SIX: HUMANS AND ANIMALS;** Behavioural Ecology and Conservation; The Behavioural Ecology and Humans; Cultural Evolution; Glossary; List of References; Index of Species; General Index

Readership: Intermediate and advanced biosciences undergraduates studying behavioural ecology or animal behaviour. Also of value to postgraduate students of behavioural ecology as well as for university and school teachers.

912 pages 2008 978-0-19-920629-2 Paperback £33.99

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